	Application No.	Applicant(s)
Notice of Allowability	09/733,946	LAM ET AL.
	Examiner	Art Unit	
	Romain Jeanty	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *11/30/04 and 2/11/05*.

2. ☒ The allowed claim(s) is/are *1-9*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____

ROMAIN JEANTY
PRIMARY EXAMINER
Art Unit 3623

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Substitute **claim 1** as:

A computer implemented method for categorizing incoming electronic communications

using a supervised machine learning component, and for factoring an organization's business

domain into the technology domain to enable an acceptable automated response and routing

scheme, said method comprising the steps of:

(a) analyzing the business domain;

(b) determining an approach to machine learning using a program or an algorithm for

inducing a categorizer using supervised learning, the categorizer being generated from training

data comprising a set of examples of the type of electronic communications to be classified;

(c) collecting existing data of representative examples of electronic communications and

inventories of personnel skills, business processes, workflows, and business missions;

(d) Analyzing the collected data for determining one or more attributes of said electronic

communications selected from the group consisting of complexity, vagueness, and uniqueness to

be expected in the type of communications to be categorized, as well as the relative numbers of

electronic communications having a particular attribute of said one or more attributes, and for

determining a technical structure of the communications relevant to categorization, and factoring

the inventories of personnel skills, business processes, workflows, and business missions

collected to determine what must be done with each electronic communication, and by whom;

(e) defining a categorization scheme;

(f) labeling examples of electronic communications with categories from the

categorization scheme for use both as training data to be used in the supervised learning step and

as test data;

(g) converting, using a computer, the labeled examples into a form suitable for

subsequent processing, both for purposes of machine learning and technical validation;

(h) performing using said computer, machine based supervised learning technology to

induce said categorizer for the categorization scheme; and

(i) validating the categorization scheme with respect to technical performance and

business requirements.

Claim 8:

Line 1, before method, please insert --computer-implemented--.

Line 2, after "component," delete "where the method factors", insert --and for factoring--.

Line 4, delete "system", and insert -- scheme--.

Line 24, after patterns, delete "may be", and insert --are--.

Line 26, after using, delete "a", and insert --said--.

Authorization for this examiner's amendment was given in a telephone interview with Michael E.

Whithman on February 11, 2005.

Allowable Subject Matter

2.   Claims 1-9 are allowed.

3.   The following is an examiner's statement of reasons for allowance:

The closest prior art is to Johnson et al U.S. Patent No. 6,519,580. Johnson et al teach a method for automatically categorizing messages using a computer for creating a rule set for a category scheme from labeled training data. However, Johnson et al fail to teach or suggest labeling examples of electronic communications with categories from the categorization schemes for use both as training data to be used in a supervised learning step and as test data as recited in independent claim1.

The closest prior art is to Johnson et al U.S. Patent No. 6,519,580. Johnson et al teach a method for automatically categorizing messages using a computer for creating a rule set for a category scheme from labeled training data. However, Johnson et al fail to teach or suggest developing using a computer, an initial categorization scheme based on areas of the business domain receiving a greater quantity of electronic communications or electronic communications relatively higher priority as recited in independent claim 8.

4.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        a.   Wolin (U.S. Patent No. 6,751,600) discloses a method of machine learning to

automatically categorize items from a plurality of pre-categorized items.

        b.   Horvitz (U.S. Patent No. 6,714,967) discloses a method for generating a priority

of the text, based on a text classifier.

        c.   Katsurabayashi et al (JP10287173A) disclose a document managing means for

managing documents regarding work by adding information on a preparer.

        d.   Tanaka et al (JP409190447A) discloses a mail classifying means which decides

the classification categories of the respective mails through the use of the classification rule.

        e.   William et al (Context-Sensitive Learning Methods for Text Categorization)

disclose a machine learning algorithm for categorizing texts.
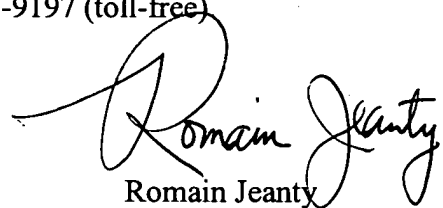
        f.   Youngjoong et al (Automatic Text Categorization by Unsupervised Learning)

disclose the concept of a text categorization scheme.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Romain Jeanty whose telephone number is (703) 308-9585. The

examiner can normally be reached on Mon-Thurs 7:30 am - 6:00 pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq R Hafiz can be reached on (703) 305-9643. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Romain Jeanty

Primary Examiner

Art Unit 3623

February 19, 2005